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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/576,129	05/22/2000	Yong-Kyu Jang	8836-329T (IY9127US)	1752

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EXAMINER	
NGUYEN, DUNG T	

ART UNIT	PAPER NUMBER
2871	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/576,129	Applicant(s) JANG, YONG-KYU	
	Examiner Dung Nguyen	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 09 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-9,11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-9,11 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 22 May 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4/18/06</u> | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Applicant's amendment dated 09/09/2003 has been received and entered. By the amendment, claims 1-5, 7-9 and 11-12 are now pending in the application.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 7-9 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al., US Patent No. 6,341,002, in view of Tillin et al., US Patent No. 6,204,904.

Regarding claims 1-4, Shimizu et al. disclose an LCD device (figures 1A and 2, 100) comprising:

- . two substrate glasses (162, 61);
- . a liquid crystal layer (140) therebetween, wherein efficient light path difference is equal to a quarter of predetermined wavelength (visible light range);
- . a polarizer (172);
- . a half wavelength retardation film (170a);
- . a quarter wavelength retardation film (170b);
- . a reflector (69).

However, Shimizu et al. do not disclose the relationship between two slow axes of the retardation films as $\Theta_2 = (2 \times \Theta_1) \pm 45$ (degrees), wherein Θ_1 is an angle between a slow axis of the

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half wavelength retardation film and a transmissive axis of the polarizer, Θ_2 is an angle between a slow axis of the quarter wavelength retardation film and the transmissive axis of the polarizer as well as the relationship between two slow axes of the addition retardation films as

$\Theta_3 = (2 \times \Theta_4) \pm 45$ (degrees), wherein Θ_4 is an angle between a slow axis of the half wavelength retardation film and a transmissive axis of the polarizer, Θ_3 is an angle between a slow axis of the quarter wavelength retardation film and the transmissive axis of the polarizer. Tillin et al. do disclose a half wavelength retardation film (5) having a slow-axis (9) which makes an angle Θ_1 with a transmissive axis of the polarizer and a quarter wavelength retardation film (30) having a slow-axis (31) which makes an angle Θ_2 with a transmissive axis of the polarizer in accordance with relation equation $\Theta_2 = (2 \times \Theta_1) \pm 45$ (degrees) (e.g., $\Theta_1 = 15^\circ$ and $\Theta_2 = 75^\circ$). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to form the Shimizu et al. device having a half wavelength retardation and a quarter wavelength satisfied the relation equation of $\Theta_2 = (2 \times \Theta_1) \pm 45$ (degrees) as shown by Tillin et al. in order to obtain an LCD device with high brightness and contrast (col. 5, line. 32). In addition, it would have been obvious to employ two slow axes of the addition retardation films as $\Theta_3 = (2 \times \Theta_4) \pm 45$ (degrees), wherein Θ_4 is an angle between a slow axis of the half wavelength retardation film and a transmissive axis of the polarizer, Θ_3 is an angle between a slow axis of the quarter wavelength retardation film and the transmissive axis of the polarizer as well for the same purpose of improving a brightness and a contrast display (Id).

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al., US Patent No. 6,341,002, in view of Tillin et al., US Patent No. 6,204,904, further in view of Yoshimizu et al., US Patent No. 5,249,071.

Regarding claims 5, the modification to Shimizu et al. do not disclose the use of single-axial films as the retardation films in the LCD device, Yoshimizu et al. do disclose a positive/negative single-axial films (i.e., uniaxial film) can be formed in an LCD device as shown in figure 10. Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to form a retardation films by single-axial films as shown by Yoshimizu et al. in order to improve a viewing angle character in a specific direction in an LCD device (see col. 5, line 30).

Response to Arguments

4. Applicant's arguments filed 09/09/2003 have been fully considered but they are not persuasive.

Applicant's only argument is that there is no motivation to combine the teaching of Shimizu and the teaching of the Tillin since Tillin fails to suggest a transfective LCD (i.e., display divided into a reflective region and a transmissive region). The Examiner respectfully disagrees with Applicant's viewpoint. In particular, the Examiner agrees that Tillin et al. disclose the reflective type LCD while Shimizu et al. disclose a transfective type LCD; however, it is noted that the features upon which applicant relies (i.e., the relationship equation $\Theta_2 = (2 \times \Theta_1) \pm 45$ and $\Theta_3 = (2 \times \Theta_4) \pm 45$ for both reflective region and transmissive region) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Therefore, the combination of Shimizu et al. and Tillin et al. would be at least met the claimed invention in the reflective region as well.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

DN

January 7, 2008

/Dung T. Nguyen/

Dung Nguyen

Primary Examiner

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